

REMARKS

Applicants are filing this divisional application so that the non-elected claims 16-20 from the parent application may now be prosecuted, along with new claims 21 through 24.

The parent application serial number 09/763,217 was allowed on August 5, 2003 and the Issue Fee was paid on November 5, 2003.

Applicant respectfully requests that this divisional application proceed to prosecution on the merits.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited in the U.S. Postal Service by Express Mail, addressed: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, MAIL STOP PATENT APPLICATIONS (DIV.) with Express Mail Label no. EU483331508US on December 11, 2003.

Signed: 

Dated: December 11, 2003

Section 4 of Page 9 of Specification:

1.1.1) Start loop for the attenuator element (k)

$$\mu_{a(i,j,k)} = \frac{\sigma_a + \sigma_a + Z_{(k)} \times \sigma_a}{PE_{(i,j,k)} PP_{(i,j,k)} C_{(i,j,k)}} \times \mu_{(k)} \times A_v/A_{(k)}$$

$$\mu_{a(i,j,k)} = [\sigma_{aPE(i,j,k)} + \sigma_{aPP(i,j,k)} Z_{(k)} \times \sigma_{aC(i,j,k)}] \times \mu_{(k)} \times A_v/A_{(k)}$$

where: $\sigma_{aPE(i,j,k)}$ = effective photoelectric absorption cross-section

$PE_{(i,j,k)}$

$\sigma_{aC(i,j,k)}$ = Compton effective absorption cross-section

$C_{(i,j,k)}$

Section 1 of Page 10 of Specification:

$\sigma_{PP(i,j,k)}$ = Effective cross-section for production of pairs $PP_{(i,j,k)}$

Section 2 of Page 10 of Specification:

$$\mu_{a(i-j)}^{(Nal)} = PE_{(j)}^{(Nal)} + Z_{(Nal)} \times \sigma_{a(i-j)}^{(Nai)} \times \frac{A_v}{A_{(Nal)}} \times \dot{\eta}_{(Nal)}$$

Section 3 of Page 10 of Specification:

$$\epsilon^{(NaI)}$$

where: $\frac{PE_{(j)} \sigma_a^{(NaI)}}{PE(j)}$ = effective photoelectric absorption cross-section for NaI.

$Z_{(NaI)}$ = average atomic number of NaI

$\epsilon_a^{(NaI)} \frac{\sigma_a^{(NaI)}}{C(i)}$ = Compton effective absorption cross-section for NaI $\epsilon_{(i)}$

Section 2 of Page 11 of Specification

$$6d \text{ if } \sigma_{C(i)} \text{ (NaI)} \times z_{\text{(NaI)}} \times \text{Final flux}_{(i,j,k)(i',j',k')} \times \frac{A_v}{A_{\text{(NaI)}}} \times p_{\text{(NaI)}} \times$$

Section 3 of Page 11 of Specification

σ_{dif}

$\sigma_{\text{dif}}(E) = \text{effective Compton scattering cross-section}$

$E(\text{eV})$

Section 4 of Page 11 of Specification

$\sum_{n=1}^{\infty} \frac{1}{n^2}$ gives scattering spectrum $(\frac{1}{n^2})_{n=1}^{\infty}$ NaI

Section 2 of Page 12 of Specification

σ_{dif}

$$= \frac{\sigma_{\text{dif}_{\text{C}(j)}}}{A_{(\text{NaI})}} (\text{NaI}) \times Z_{(\text{NaI})} \times \text{final flux}_{(i,j,k)} \times \frac{A_{\text{v}}}{A_{(\text{NaI})}} \times p_{(\text{NaI})} \times X_{(\text{NaI})}$$

$\epsilon_{(j)}$

where: $\sigma_{\text{dif}_{\text{C}(j)}} (\text{NaI}) =$ effective Compton front scattering cross-section

$\epsilon_{(j)}$

Section 3 of Page 12 of Specification

$\sum_{n=1}^N \psi_n \underline{V}_n$ gives scattering spectrum_(i,j)NaI

Section 5 of Page 12 of Specification

σ_{dif}

$$= \frac{\sigma_{\text{dif}_{\text{C}(\gamma)}}}{A_{(\text{NaI})}} (\text{NaI}) x Z_{(\text{NaI})} x \text{final flux}_{(i,j,k)} x \frac{A_v}{A_{(\text{NaI})}} x p_{(\text{NaI})} x X_{(\text{NaI})}$$

$\epsilon_{(\gamma)}$

where: $\sigma_{\text{dif}_{\text{C}(\gamma)}}$ = effective Compton background scattering cross-section

$\epsilon_{(\gamma)}$

Section 1 of Page 13 of Specification

$\sum_{n=1}^N \underline{V}_n$ gives scattering spectrum_(i,j,...)NaI